### DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division — Biology Bureau

#### LAKE TROPHIC DATA

#### MORPHOMETRIC:

Lake: SAWYER	POND	Lake Area (ha):	19.02
Town:		Maximum depth (m):	29.6
County:	Grafton	Mean dept <u>h</u> (m):	12.2
River Basin:	Saco	Volume (m³):	2313500
Latitude:	44°03'00" N	Relative depth:	6.0
Longitude:	71°22'40" W	Shore configuration:	1.23
Elevation (f	t): 1937	Areal water load (m/yr	12.43
Shore length	(m): 1900		1.00
Watershed ar	ea (ha): 310.8	P retention coeff.:	0.52
% watershed :	panded: 1.5	Lake type:	natural

BIOLOGICAL:	6 February 1990	8 August 1989
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	DINOBRYON 95%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		
CHLOROPHYLL-A (µg/L)		0.57
DOM. ZOOPLANKTON (% TOTAL) #1	CALANOID COPEPOD >99%	CALANOID COPEPOD 30%
#2		KERATELLA 22%
#3		COLLOTHECA 18%
ROTIFERS/LITER	0	20
MICROCRUSTACEA/LITER	6	30
ZOOPLANKTON ABUNDANCE (#/L)	6	50
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		9.3
BOTTOM DISSOLVED OXYGEN (mg/L)	5.2	3.6
BACTERIA (fecal col., #/100 ml) #1		
#2		
#3		

### SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermacline (m): 4.2 Hypolimnian valume (m³): 1229500

#### CHEMICAL:

Lake: SAWYER POND Town: LIVERMORE

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	6 Febru	Jary 1990	8 4	nugust 198	39
DEPTH (m)	10.0	20.0	2.0	6.5	20.0
pH (units)	6.4	6.3	6.8	6.5	6.2
A.N.C. (Alkalinity)	4.8	5.5	3.1	4.2	6.2
NITRATE NITROGEN	0.08	0.10	0.11		0.10
TOTAL KJELDAHL NITROGEN	0.13	0.13	0.49	0.12	0.15
TOTAL PHOSPHORUS	0.003	0.004	0.005	0.007	0.006
CONDUCTIVITY (p mhas/cm)	26.0	27.2	22.0	23.6	29.1
APPARENT COLOR (cpu)	8	8	14	13	11
MAGNESIUM			0.16		
CALCIUM			2.0		
SODIUM			< 3.0		
POTASSIUM			0.80		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	3	3	3		3
TN : TP	70	58	120		42
CALCITE SATURATION INDEX			3.7		

All results in mg/L unless indicated otherwise

#### TROPHIC CLASSIFICATION: 1989

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
2	0	1	0	3	Oligo.

#### **COMMENTS:**

- 1. Also known as Big Sawyer Pond.
- 2. This is a remote pond in the White Mountain National Forest. It is accessible by trail only. An AMC shelter and tent sites were located along the shore.
- 3. Motorized boats are not allowed on the pond.
- 4. Some rotifers (namely <u>Keratella</u>, <u>Kellicottia</u>, and <u>Polyarthra</u>) were observed in the winter plankton haul. They were not, however, picked up in the count; thus, the zero value for rotifers per liter.
- 5. No whole-water phytoplankton analysis was completed.

## Sawyer Pond

Livermore 10 FT. ISOBATHS

> ROUGH BATHYMETRIC CHART SOUNDED BY FATHOMETER DES - 1989

#### FIELD DATA SHEET

LAKE: SAWYER POND

DATE: 08/08/89

TOWN: LIVERMORE

WEATHER: CLEAR AND COOL

DEPTH (M)         TEMP (°C)         *DISSOLVED OXYGEN         OXYGE SATURAT           0.1         21.5         8.5         94           1.0         21.5         8.4         94           2.0         21.5         8.3         93           3.0         21.2         8.3         93           4.0         17.7         12.1         125           5.0         12.2         12.3         113           6.0         9.3         12.0         104           7.0         7.8         11.7         95           8.0         6.7         11.3         90           9.0         5.9         10.7         82	
1.0       21.5       8.4       94         2.0       21.5       8.3       93         3.0       21.2       8.3       93         4.0       17.7       12.1       125         5.0       12.2       12.3       113         6.0       9.3       12.0       104         7.0       7.8       11.7       95         8.0       6.7       11.3       90	
2.0       21.5       8.3       93         3.0       21.2       8.3       93         4.0       17.7       12.1       125         5.0       12.2       12.3       113         6.0       9.3       12.0       104         7.0       7.8       11.7       95         8.0       6.7       11.3       90	%
3.0       21.2       8.3       93         4.0       17.7       12.1       125         5.0       12.2       12.3       113         6.0       9.3       12.0       104         7.0       7.8       11.7       95         8.0       6.7       11.3       90	%
3.0     21.2     8.3     93       4.0     17.7     12.1     125       5.0     12.2     12.3     113       6.0     9.3     12.0     104       7.0     7.8     11.7     95       8.0     6.7     11.3     90	%
5.0     12.2     12.3     113       6.0     9.3     12.0     104       7.0     7.8     11.7     95       8.0     6.7     11.3     90	%
6.0     9.3     12.0     104       7.0     7.8     11.7     95       8.0     6.7     11.3     90	%
7.0     7.8     11.7     95       8.0     6.7     11.3     90	%
8.0 6.7 11.3 90	%
	%
9.0 5.9 10.7 82	%
	%
10.0 5.4 10.2 79	%
15.0 4.2 8.2 62	%
20.0 4.1 6.1 46	%
25.0 4.1 4.8 36	%
27.0 4.1 3.6 27	%

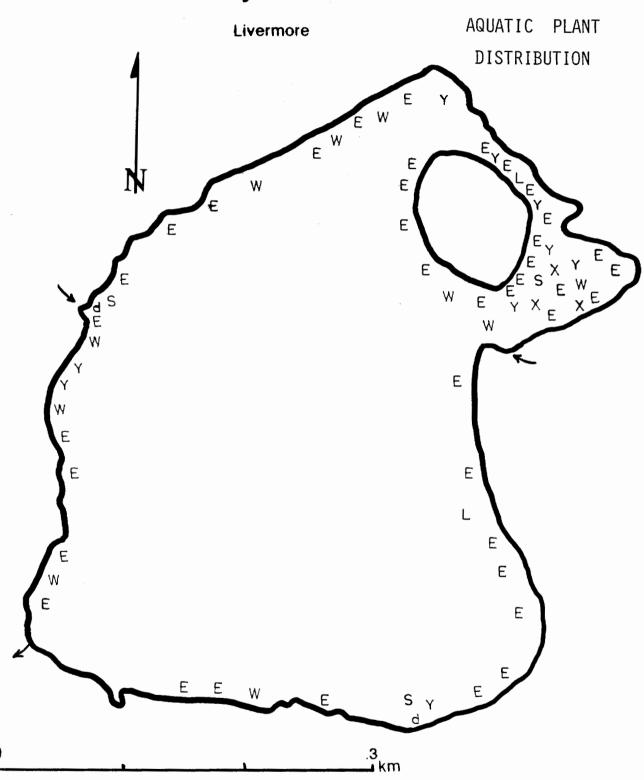
SECCHI DISK (m): 9.3 COMMENTS:

BOTTOM DEPTH (m): 28.3

TIME: 730

\*Dissolved oxygen values are in mg/L

# Sawyer Pond



#### AQUATIC PLANT SURVEY

LAKE: SAWYER POND TOWN: LIVERMORE DATE: 08/08/89

Key	PL	ABUNDANCE	
Veal	GENERIC	COMMON	ABONDANCE
Е	Eriocaulon septangulare	Pipewort	Scattered
W	Potamogeton	Pondweed	Sparse
S	Sparganium	Bur reed	Sparse
d	Dulichíum arundinaceum	Three-way sedge	Sparse
L	Lobelia dortmanna	Water lobelia	Sparse
Υ	Nuphar	Yellow water lily	Sparse
Х		Bottom growth	Sparse
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OVERALL ABUNDANCE: Scattered

#### **GENERAL OBSERVATIONS:**

- 1. Pipewort was found along most of the shoreline but, because of its sparse growth habit, it was given a rating of scattered.
- 2. Plants were locally abundant behind the island and in the northeast cove. The overall plant rating was scattered.
- 3. Observed one loon and a beaver lodge.